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**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Application Number: 09/803,441
Filing Date: March 09, 2001
Appellant(s): LEHMEIER ET AL.

Dan C. Hu
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 02 July 2007 appealing from the Office action mailed 02 February 2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

| | | |
|---|---|---|
| 6,618,499 | KOHLER ET AL | 9-2003 |
| 6,344,853 | KNIGHT | 2-2002 |
| 5,751,829 | RINGLAND ET AL. | 5-1998 |
| 5,528,703 | LEE | 6-1996 |
| 5,506,946 | BAR ET AL. | 4-1996 |
| 5,594,807 | LIU | 1-1997 |

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

**Claims 26-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

The "program code" recited in claim 26 is not necessarily computer program code. Further, said program code is not necessarily encoded, embodied, or stored on the recited computer-readable medium, but merely "contained" on said computer readable medium. Computer program code needs to be encoded, embodied or stored on a computer readable medium in order to permit the computer program code's functionality to be realized.

**Claims 1, 3-4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohler (US Patent 6,618,499 B1) in view of Knight (US Patent 6,344,853 B1).**

**Regarding claim 1:** Kohler discloses scanning an object (column 4, lines 50-52 of Kohler) having a color to be matched (column 5, lines 22-25 and lines 32-36 of Kohler) to produce a color image data signal representative of said object (column 5, lines 29-36 of Kohler); mapping said color image data signal to the defined color space to ascertain the corresponding color (column 9, line 63 to column 10, line 1 of Kohler); determining the identity of the corresponding color (figure 6(S603-S610); column 10, lines 1-7; and column 12, lines 58-64 of Kohler); and sending the identity of the corresponding color over a network to a website (column 4, lines 61-65 of Kohler). By sending the output image over a network to a website (column 4, lines 61-65 of Kohler), the determined identity of the corresponding color (figure 6 (S603-S610); column 10, lines 1-7; and column 12, lines 58-64 of Kohler) is also sent over a network to a website since said identity is clearly needed to reproduce the color (column 5, lines 29-36 and column 13, lines 5-8 of Kohler).

Kohler does not disclose expressly that said sending the identity of the corresponding color to the website comprises sending the identity of the corresponding color to a shopping website for purchasing a product having the corresponding color.

Knight discloses sending the identity of the corresponding color to a shopping website for purchasing a product having a corresponding color (column 10, lines 13-20 of Knight).

Kohler and Knight are combinable because they are from the same field of endeavor, namely digital color image data processing, transmission and storage. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to specifically send the corresponding color taught by Kohler to a shopping website for purchasing a product having a corresponding color, as taught by Knight. The motivation for doing so would have been to aid the purchase of particular products by allowing a buyer to select and choose between various possible colors in a set of products (column 3, lines 7-12 of Knight). Therefore, it would have been obvious to combine Knight with Kohler to obtain the invention as specified in claim 1.

**Regarding claim 3:** Kohler discloses that the identity of the corresponding color comprises a reference number (P') (column 12, lines 58-64 of Kohler), and wherein sending the identity of the corresponding color comprises sending the reference number associated with said corresponding color (column 4, lines 61-65 and column 13, lines 5-8 of Kohler). The printing is performed on the basis of the reference number P' (column 13, lines 5-8 of Kohler), which must therefore be sent over the network to the website to be printed (column 4, lines 61-65 of Kohler).

**Regarding claim 4:** Kohler discloses using said reference number to match a color with the color to be matched (column 13, lines 5-7 of Kohler).

**Regarding claim 11:** Kohler discloses that mapping said color image data signal to the defined color space to ascertain the corresponding color comprises using a color look-up table (figures 5A-5B and column 8, lines 50-59 of Kohler).

**Claims 5-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohler (US Patent 6,618,499 B1) in view of Knight (US Patent 6,344,853 B1) and Ringland (US Patent 5,751,829).**

**Regarding claim 5:** Kohler discloses that said reference number (P') is output (column 4, lines 61-65 and column 13, lines 5-8 of Kohler).

Kohler in view of Knight does not disclose expressly displaying said reference number.

Ringland discloses displaying said reference number (figure 6(614) and column 19, lines 12-15 of Ringland).

Kohler in view of Knight is combinable with Ringland because they are from the same field of endeavor, namely color image data processing and matching. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to specifically display the reference number, as taught by Ringland. The motivation for doing so would have been to allow a user to search for a particular desired color based on the reference number (column 17, lines 7-13 of Ringland). Therefore, it would have been obvious to combine Ringland with Kohler in view of Knight to obtain the invention as specified in claim 5.

**Regarding claim 6:** Kohler in view of Knight does not disclose expressly selecting a color region on said object, the color region containing said color to be matched.

Ringland discloses selecting a color region on said object, the color region containing said color to be matched (column 19, lines 38-42 and lines 56-61 of Ringland).

Kohler in view of Knight is combinable with Ringland because they are from the same field of endeavor, namely color image data processing and matching. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to specifically select a color region of said object containing the color to be matched, as taught by Ringland. The motivation for doing so would have been to allow a user to concentrate on matching particularly desired sections of an object to the particular

degree desired (column 19, lines 56-63 of Ringland). Therefore, it would have been obvious to combine Ringland with Kohler in view of Knight to obtain the invention as specified in claim 6.

**Regarding claim 7:** Kohler in view of Knight does not disclose expressly selecting a color region of said color image data signal, the color region containing said color to be matched.

Ringland discloses selecting a color region of said color image data signal, the color region containing said color to be matched (column 19, lines 38-42 and lines 56-61 of Ringland).

Kohler in view of Knight is combinable with Ringland because they are from the same field of endeavor, namely color image data processing and matching. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to specifically select a color region of said color image data signal containing the color to be matched, as taught by Ringland. The motivation for doing so would have been to allow a user to concentrate on matching particularly desired sections of an object to the particular degree desired (column 19, lines 56-63 of Ringland). Therefore, it would have been obvious to combine Ringland with Kohler in view of Knight to obtain the invention as specified in claim 7.

**Regarding claim 8:** Kohler in view of Knight does not disclose expressly that said object comprises a plurality of colors, and further comprising selecting one of said plurality of colors as said color to be matched.

Ringland discloses a plurality of colors and selecting one of said plurality of colors as said color to be matched (column 17, lines 1-3 and lines 15-17 of Ringland).

Kohler in view of Knight is combinable with Ringland because they are from the same field of endeavor, namely image data processing and color matching. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to select a color to be matched from a plurality of colors, as taught by Ringland. The motivation for doing so would have been to allow a user to match the color of a particular item desired by a user as close as possible to the set of available colors provided by

the vendor (column 17, lines 19-23 of Ringland). Therefore, it would have been obvious to combine Ringland with Kohler in view of Knight to obtain the invention as specified in claim 8.

**Regarding claim 10:** Kohler in view of Knight does not disclose expressly that said defined color space comprises the Pantone Matching System.

Ringland discloses that said defined color space comprises the Pantone Matching System (column 17, lines 19-22 of Ringland).

Kohler in view of Knight is combinable with Ringland because they are from the same field of endeavor, namely image data processing and color matching. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to specifically use the Pantone Matching System, as taught by Ringland. The suggestion for doing so would have been that any of a variety of possible color gamuts can be used in the system of Kohler (column 8, lines 17-21 and lines 28-32 of Kohler), and the Pantone Matching System is typical and well-known color gamut. Therefore, it would have been obvious to combine Ringland with Kohler in view of Knight to obtain the invention as specified in claim 10.

**Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kohler (US Patent 6,618,499 B1) in view of Knight (US Patent 6,344,853 B1) and Lee (US Patent 5,528,703).**

**Regarding claim 9:** Kohler in view of Knight does not disclose expressly that said object has texture; and processing said color image data signal to remove the influence of said texture from the color image data signal.

Lee discloses that an object has texture (figure 2B and column 6, lines 58-60 of Lee); and processing said color image data signal to remove the influence of said texture from the color image data signal (figure 3(306) and column 6, lines 60-61 of Lee).

Kohler in view of Knight combinable with Lee because they are from the same field of endeavor, namely digital image data processing for different types of objects. At the time of the invention, it would

have been obvious to a person of ordinary skill in the art to remove any texture of an object from the color image data signal, as taught by Lee. The motivation for doing so would have been that object texture detracts from the ability to determine the size, shape and location of objects of interest (column 6, lines 54-60 of Lee). Therefore, it would have been obvious to combine Lee with Kohler in view of Knight to obtain the invention as specified in claim 9.

**Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohler (US Patent 6,618,499 B1) in view of Knight (US Patent 6,344,853 B1) and Bar (US Patent 5,506,946).**

**Regarding claim 12:** Kohler discloses that said color image data comprises a plurality of pixels (column 4, lines 51-53 of Kohler). If an entire document is scanned in, then there are a plurality of pixels.

Kohler in view of Knight does not disclose expressly that each pixel has a red tristimulus value, a green tristimulus value, and a blue tristimulus value associated therewith, and wherein mapping said color image data signal to the defined color space to ascertain the corresponding color further comprises computing an average red tristimulus value, an average green tristimulus value, and an average blue tristimulus value from the red, green and blue tristimulus values of one or more of said plurality of pixels; and inputting the average red, green and blue tristimulus values into said color look-up table to obtain the corresponding color.

Bar discloses that each pixel has a red tristimulus value, a green tristimulus value, and a blue tristimulus value associated therewith (column 6, lines 3-9 of Bar); and computing an average red tristimulus value, an average green tristimulus value, and an average blue tristimulus value from the red, green and blue tristimulus values of one or more of said plurality of pixels (column 6, lines 7-9 and column 10, lines 52-56 of Bar).

Kohler in view of Knight is combinable with Bar because they are from the same field of endeavor, namely image data and color processing. At the time of the invention, it would have been

obvious to a person of ordinary skill in the art to compute the average RGB values for the color region, as taught by Bar, and thus use said average RGB values as the input to the look-up tables taught by Kohler. The motivation for doing so would have been that the modification of the color occurs for the entire region based on the target color (column 5, lines 28-35 of Bar). Furthermore, the system of Kohler can be implemented using a wide variety of different color spaces (column 6, lines 28-31 of Kohler). Therefore, it would have been obvious to combine Bar with Kohler in view of Knight to obtain the invention as specified in claim 12.

**Regarding claim 13:** Kohler discloses that said color image data comprises a plurality of pixels (column 4, lines 51-53 of Kohler). If an entire document is scanned in, then there are a plurality of pixels.

Kohler further discloses that mapping said color image data signal to the defined color space to ascertain the corresponding color further comprises inputting the tristimulus values (H,L,C) of one or more of said plurality of pixels into said color look-up table to obtain one or more reference numbers (figures 5A-5B and column 8, lines 50-59 of Kohler).

Kohler in view of Knight does not disclose expressly that each pixel has a red tristimulus value, a green tristimulus value, and a blue tristimulus value associated therewith; that said input tristimulus values are specifically red tristimulus values, green tristimulus values, and blue tristimulus values; and computing an average reference number from said one or more reference numbers, the average reference number identifying said corresponding color.

Bar discloses computing the average colorimetric values for a specified color image data signal region (column 10, lines 52-56 of Bar).

Kohler in view of Knight is combinable with Bar because they are from the same field of endeavor, namely image data and color processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to compute the average colorimetric values for the color region, as taught by Bar, said average values being the reference number values (P') taught by Kohler.

Since said reference number values are directly mapped to the color values (column 12, lines 50-64 of Kohler), computing said average colorimetric values and then computing the mapping of said colorimetric values will result in the computation of said average reference number. Further, said average reference number would therefore identify said corresponding color. The motivation for doing so would have been that the modification of the color occurs for the entire region based on the target color (column 5, lines 28-35 of Bar). Therefore, it would have been obvious to combine Bar with Kohler in view of Knight to obtain the invention as specified in claim 13.

**Claims 14, 19-20 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohler (US Patent 6,618,499 B1) in view of Ringland (US Patent 5,751,829).**

**Regarding claim 14:** Kohler discloses a system (figure 1 and figure 2 of Kohler) comprising scanning apparatus (figure 1(7) of Kohler), said scanning apparatus to scan an object having the color to be matched (column 5, lines 22-25 and lines 32-36 of Kohler), said scanner apparatus to produce a color image data signal representative of said object (column 5, lines 29-36 of Kohler); and a computer (figure 1(2) of Kohler) operatively associated with said scanner apparatus (see figure 1 of Kohler), said computer to: determine a specific color from a plurality of colors (column 10, lines 7-13 of Kohler); map a portion of said color image data signal corresponding to the specific color to the defined color space to ascertain an identity (P') of the corresponding color (column 9, line 63 to column 10, line 1 of Kohler); and output the identity of the corresponding color (column 12, lines 58-64 of Kohler).

Kohler does not disclose expressly that said computer, in response to user selection, selects a color region of the color image data signal representative of said object; determines a dominant color from a plurality of colors in the selected color region; and presents the identity of the corresponding color to a user; and that said mapped portion of said color image data signal corresponds to said dominant color.

Ringland discloses, in response to a user selection, selecting a color region of the color image data signal representative of said object (column 19, lines 38-42 of Ringland); determining a dominant color from a plurality of colors in the selected color region (column 19, lines 38-41 and lines 56-61 of Ringland); mapping a portion of said color image data signal corresponding to the dominant color (column 19, lines 38-42 of Ringland) to the defined color space to ascertain an identity of the corresponding color (column 19, lines 47-51 of Ringland); and presenting the identity of the corresponding color to a user (column 20, lines 9-14 of Ringland).

Kohler and Ringland are combinable because they are from the same field of endeavor, namely image data processing and color matching. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to allow a user to select a region from which a dominant color is determined and matched and then the identity of the corresponding matching color from the defined color space presented to the user, as taught by Ringland. The motivation for doing so would have been to allow the user to properly match a desired color with an available color palette (column 17, lines 18-23 of Ringland). Therefore, it would have been obvious to combine Ringland with Kohler to obtain the invention as specified in claim 14.

**Regarding claim 19:** Kohler discloses at least one computer readable storage medium operatively associated with said computer (column 8, lines 50-59 of Kohler); and a color look-up table stored on the at least one computer readable storage device, said computer using the color look-up table when mapping said portion of the color image data signal to the defined color space to ascertain the identity of the corresponding color (figures 5A-5B and column 8, lines 50-59 of Kohler).

**Regarding claim 20:** Kohler does not disclose expressly that said defined color space comprises the Pantone Matching System.

Ringland discloses that said defined color space comprises the Pantone Matching System (column 17, lines 19-22 of Ringland).

Kohler and Ringland are combinable because they are from the same field of endeavor, namely image data processing and color matching. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to specifically use the Pantone Matching System, as taught by Ringland. The suggestion for doing so would have been that any of a variety of possible color gamuts can be used in the system of Kohler (column 8, lines 17-21 and lines 28-32 of Kohler), and the Pantone Matching System is typical and well-known color gamut. Therefore, it would have been obvious to combine Ringland with Kohler to obtain the invention specified in claim 20.

**Regarding claim 28:** Kohler discloses a system (figure 1 and figure 2 of Kohler) comprising a storage device (column 4, lines 40-46 of Kohler) to store information representing a defined color space (column 5, lines 29-36 of Kohler); and a processor (figure 1(2) of Kohler) to receive color image data representing an object scanned by a scanner (column 4, lines 50-52 of Kohler); map a portion of the color image data to a corresponding color in the defined color space (column 9, line 63 to column 10, line 1 of Kohler) to ascertain an identity of a corresponding color (figure 6(S603-S610); column 10, lines 1-7; and column 12, lines 58-64 of Kohler); and communicate the identity of the corresponding color to a website (column 4, lines 61-65 of Kohler). By sending the output image over a network to a website (column 4, lines 61-65 of Kohler), the determined identity of the corresponding color (figure 6(S603-S610); column 10, lines 1-7; and column 12, lines 58-64 of Kohler) is also sent over a network to a website since said identity is clearly needed to reproduce the color (column 5, lines 29-36 and column 13, lines 5-8 of Kohler).

Kohler does not disclose expressly that said processor, in response to user selection, selects a color region of the color image data; determines a dominant color from a plurality of colors in the selected color region; and that said mapped portion of said color image data corresponds to said dominant color.

Ringland discloses, in response to a user selection, selecting a color region of the color image data (column 19, lines 38-42 of Ringland); determining a dominant color from a plurality of colors in the

selected color region (column 19, lines 38-41 and lines 56-61 of Ringland); and mapping a portion of said color image data corresponding to the dominant color (column 19, lines 38-42 of Ringland) to the defined color space to ascertain an identity of the corresponding color (column 19, lines 47-51 of Ringland).

Kohler and Ringland are combinable because they are from the same field of endeavor, namely image data processing and color matching. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to allow a user to select a region from which a dominant color is determined and matched and then the identity of the corresponding matching color from the defined color space presented to the user, as taught by Ringland. The motivation for doing so would have been to allow the user to properly match a desired color with an available color palette (column 17, lines 18-23 of Ringland). Therefore, it would have been obvious to combine Ringland with Kohler to obtain the invention as specified in claim 28.

**Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kohler (US Patent 6,618,499 B1) in view of Ringland (US Patent 5,751,829) and Lee (US Patent 5,528,703).**

**Regarding claim 18:** Kohler discloses at least one computer readable storage device operatively associated with said computer (column 4, lines 40-46 of Kohler); and that computer readable program code is stored on said at least one computer readable storage device (column 4, lines 40-46 of Kohler).

Kohler in view of Ringland does not disclose expressly that said object has a texture; and that said computer readable program code is for removing the influence of the texture from said color image data signal.

Lee discloses that an object has texture (figure 2B and column 6, lines 58-60 of Lee); and processing said color image data signal to remove the influence of said texture from the color image data signal (figure 3(306) and column 6, lines 60-61 of Lee).

Kohler in view of Ringland is combinable with Lee because they are from the same field of endeavor, namely digital image data processing for different types of objects. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to remove any texture of an object from the color image data signal, as taught by Lee, using computer read-able program code, as taught by Kohler. The motivation for doing so would have been that object texture detracts from the ability to determine the size, shape and location of objects of interest (column 6, lines 54-60 of Lee). Therefore, it would have been obvious to combine Lee with Kohler in view of Ringland to obtain the invention as specified in claim 18.

**Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohler (US Patent 6,618,499 B1) in view of Knight (US Patent 6,344,853 B1), Ringland (US Patent 5,751,829) and Liu (US Patent 5,594,807).**

**Regarding claim 22:** Kohler discloses mapping said color image data signal to the defined color space to ascertain the corresponding color (column 9, line 63 to column 10, line 1 of Kohler).

Kohler in view of Knight and Ringland does not disclose expressly randomly selecting pixels in the selected color region; and mapping a portion of the color image data signal corresponding to the randomly selected pixels to the defined color space.

Liu discloses randomly selecting pixels in a selected color region (column 20, lines 11-16 of Liu).

Kohler in view of Knight and Ringland is combinable with Liu because they are from the same field of endeavor, namely digital color image data processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to randomly select pixel from a color image, as taught by Liu. Thus, it will be the portion of the color image data signal corresponding to the randomly selected pixels taught by Liu that is mapped to the defined color space, as taught by Kohler. The motivation for doing so would have been to reduce the computational requirements for automatically finding an

appropriate reference pixel for the image area (column 20, lines 18-23 of Liu). Computational optimization of this sort is a common reason to use Monte-Carlo randomization in computations. Therefore, it would have been obvious to combine Liu with Kohler in view of Knight and Ringland to obtain the invention as specified in claim 22.

**Regarding claim 23:** Kohler in view of Knight does not disclose expressly determining a dominant color in the selected color region using histograms representing respective colors, wherein mapping said color image data signal to the defined color space comprises mapping a portion of the color image data signal corresponding to the determined dominant color to the defined color space.

Ringland discloses determining a dominant color from a plurality of colors in the selected color region (column 19, lines 38-41 and lines 56-61 of Ringland); and mapping a portion of said color image data signal corresponding to the determined dominant color (column 19, lines 38-42 of Ringland) to the defined color space (column 19, lines 47-51 of Ringland).

Kohler in view of Knight is combinable with Ringland because they are from the same field of endeavor, namely color image data processing and matching. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to determine a dominant color and map the portion of said color image data signal corresponding to the determined dominant color to the defined color space, as taught by Ringland. The motivation for doing so would have been to allow the user to properly match a desired color with an available color palette (column 17, lines 18-23 of Ringland). Therefore, it would have been obvious to combine Ringland with Kohler in view of Knight.

Kohler in view of Knight and Ringland does not disclose expressly that said dominant color is selected using histograms representing respective colors.

Liu discloses determining a dominant color using histograms representing respective colors (figure 4; figure 5; and column 9, lines 56-67 of Liu).

Kohler in view of Knight and Ringland is combinable with Liu because they are from the same field of endeavor, namely digital color image data processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a histogram representing respective colors to select a dominant color, as taught by Liu. The motivation for doing so would have been to be able to determine to what extent particular pixel values in the color image data are true signal representations and to what extent each particular pixel value represents the image noise variations from "real" color and intensity values, thus providing a more genuine representation (column 9, lines 49-56 of Liu). Therefore, it would have been obvious to combine Liu with Kohler in view of Knight and Ringland to obtain the invention as specified in claim 23.

**Claims 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kohler (US Patent 6,618,499 B1) in view of Ringland (US Patent 5,751,829) and Liu (US Patent 5,594,807).**

**Regarding claim 24:** Kohler in view of Ringland does not disclose expressly that the computer determines the dominant color in the selected color region using histograms representing the plurality of colors.

Liu discloses determining a dominant color using histograms representing respective colors (figure 4; figure 5; and column 9, lines 56-67 of Liu).

Kohler in view of Ringland is combinable with Liu because they are from the same field of endeavor, namely digital color image data processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a histogram representing respective colors to select a dominant color, as taught by Liu. The motivation for doing so would have been to be able to determine to what extent particular pixel values in the color image data are true signal representations and to what extent each particular pixel value represents the image noise variations from "real" color and intensity values, thus providing a more genuine representation (column 9, lines 49-56 of Liu). Therefore, it would

have been obvious to combine Liu with Kohler in view of Ringland to obtain the invention as specified in claim 24.

**Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kohler (US Patent 6,618,499 B1) in view of Lee (US Patent 5,528,703).**

**Regarding claim 26:** Kohler discloses an article (figure 1 and figure 2 of Kohler) comprising a storage device containing program code (column 4, lines 40-46 of Kohler) that when executed causes a system to receive color image data representing an object scanned by a scanner (column 4, lines 50-52 of Kohler); map the color image data to a corresponding color in a defined color space (column 9, line 63 to column 10, line 1 of Kohler); wherein the program code when executed causes the system to send an identity of the corresponding color over a network to a web-site (column 4, lines 61-65 of Kohler). By sending the output image over a network to a website (column 4, lines 61-65 of Kohler), the determined identity of the corresponding color (figure 6(S603-S610); column 10, lines 1-7; and column 12, lines 58-64 of Kohler) is also sent over a network to a website since said identity is clearly needed to reproduce the color (column 5, lines 29-36 and column 13, lines 5-8 of Kohler).

Kohler does not disclose expressly that said object has texture; processing the color image data to remove influence of the texture, the processing producing a detexturized color image data; and that the mapped color image data is detexturized color image data.

Lee discloses that an object has texture (figure 2B and column 6, lines 58-60 of Lee); and processing the color image data to remove the influence of said texture, the processing producing detexturized color image data (figure 3(306) and column 6, lines 60-61 of Lee).

Kohler and Lee are combinable because they are from the same field of endeavor, namely digital image data processing for different types of objects. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to remove any texture of an object from the color image

data signal, as taught by Lee. Thus, the mapped color image data would then be detexturized color image data. The motivation for doing so would have been that object texture detracts from the ability to determine the size, shape and location of objects of interest (column 6, lines 54-60 of Lee). Therefore, it would have been obvious to combine Lee with Kohler to obtain the invention as specified in claim 26.

**Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kohler (US Patent 6,618,499 B1) in view of Lee (US Patent 5,528,703) and Knight (US Patent 6,344,853 B1).**

**Regarding claim 27:** Kohler in view of Lee does not disclose expressly that sending the identity of the corresponding color to the website comprises sending the identity of the corresponding color to a shopping website for purchasing a product having the corresponding color.

Knight discloses that sending the identity of the corresponding color to the website (figure 3E (154) and column 10, lines 13-18 of Knight) comprises sending the identity of the corresponding color to a shopping website for purchasing a product having a corresponding color (column 10, lines 13-20 of Knight).

Kohler in view of Lee is combinable with Knight because they are from the same field of endeavor, namely digital color image data processing, transmission and storage. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to specifically send the corresponding color taught by Kohler to a shopping website for purchasing a product having a corresponding color, as taught by Knight. The motivation for doing so would have been to aid the purchase of particular products by allowing a buyer to select and choose between various possible colors in a set of products (column 3, lines 7-12 of Knight). Therefore, it would have been obvious to combine Knight with Kohler in view of Lee to obtain the invention as specified in claim 27.

**Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kohler (US Patent 6,618,499 B1) in view of Ringland (US Patent 5,751,829) and Knight (US Patent 6,344,853 B1).**

**Regarding claim 29:** Kohler in view of Ringland does not disclose expressly that sending the identity of the corresponding color to the website comprises sending the identity of the corresponding color to a shopping website for purchasing a product having the corresponding color.

Knight discloses that sending the identity of the corresponding color to the website (figure 3E (154) and column 10, lines 13-18 of Knight) comprises sending the identity of the corresponding color to a shopping website for purchasing a product having a corresponding color (column 10, lines 13-20 of Knight).

Kohler in view of Ringland is combinable with Knight because they are from the same field of endeavor, namely digital color image data processing, transmission and storage. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to specifically send the corresponding color taught by Kohler to a shopping website for purchasing a product having a corresponding color, as taught by Knight. The motivation for doing so would have been to aid the purchase of particular products by allowing a buyer to select and choose between various possible colors in a set of products (column 3, lines 7-12 of Knight). Therefore, it would have been obvious to combine Knight with Kohler in view of Ringland to obtain the invention as specified in claim 29.

**Claim 32 rejected under 35 U.S.C. 103(a) as being unpatentable over Kohler (US Patent 6,618,499 B1) in view of Ringland (US Patent 5,751,829) and Liu (US Patent 5,594,807).**

**Regarding claim 32:** Kohler does not disclose expressly determining a dominant color in the selected color region using histograms representing respective colors, wherein mapping said color image data signal to the defined color space comprises mapping a portion of the color image data signal corresponding to the determined dominant color to the defined color space.

Ringland discloses determining a dominant color from a plurality of colors in the selected color region (column 19, lines 38-41 and lines 56-61 of Ringland); and mapping a portion of said color image data signal corresponding to the determined dominant color (column 19, lines 38-42 of Ringland) to the defined color space (column 19, lines 47-51 of Ringland).

Kohler and Ringland are combinable because they are from the same field of endeavor, namely color image data processing and matching. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to determine a dominant color and map the portion of said color image data signal corresponding to the determined dominant color to the defined color space, as taught by Ringland. The motivation for doing so would have been to allow the user to properly match a desired color with an available color palette (column 17, lines 18-23 of Ringland). Therefore, it would have been obvious to combine Ringland with Kohler.

Kohler in view of Ringland does not disclose expressly that said dominant color is selected using histograms representing respective colors.

Liu discloses determining a dominant color using histograms representing respective colors (figure 4; figure 5; and column 9, lines 56-67 of Liu).

Kohler in view of Ringland is combinable with Liu because they are from the same field of endeavor, namely digital color image data processing. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a histogram representing respective colors to select a dominant color, as taught by Liu. The motivation for doing so would have been to be able to determine to what extent particular pixel values in the color image data are true signal representations and to what extent each particular pixel value represents the image noise variations from "real" color and intensity values, thus providing a more genuine representation (column 9, lines 49-56 of Liu). Therefore, it would have been obvious to combine Liu with Kohler in view of Ringland to obtain the invention as specified in claim 32.

**(10) Response to Argument**

**Regarding Section A of Appellant's Arguments:**

A text file containing program code written in some high-level programming language would reasonably read upon the specific words used to recite claims 26-27. It is not merely a matter of appearance. Since claims 26-27 encompass a text file on a computer disc, claims 26-27 recite non-functional descriptive material. Mere data, in this case a text file, stored on a disc is not patentable subject matter. A text file containing program code in a high-level computer language can be compiled by an appropriate compiler and then executed by a processor. However, the text file itself, which is what is encompassed by the language of claims 26-27, is itself merely data on a computer-readable medium. A simple program listing in a text file does not itself provide a structural interrelationship between the program code and the rest of the computer so that the program code's functionality can be realized. A text file on a computer-readable medium is not a process, machine, article of manufacture, or composition of matter, and is thus not eligible for protection under 35 USC § 101.

**Regarding Section B of Appellant's arguments:**

Appellant provides a basic overview of Kohler (USPN 6,618,499) and Knight (USPN 6,344,853), but neglects key details which are essential in understanding how the two references have been brought together by combination. Knight is not relied upon for the full teaching of "sending the identity of the corresponding color to a shopping website for purchasing a product having the corresponding color", as recited in claim 1. Rather, a nexus of teaching between Kohler and Knight was set forth in the prior art rejection since Kohler teaches sending the identity of the corresponding color over a network to a website (column 4, lines 61-65 of Kohler). As explained in the prior art rejection, by sending the output image over a network to a website (column 4, lines 61-65 of Kohler), the determined identity of the

corresponding color (figure 6 (S603-S610); column 10, lines 1-7; and column 12, lines 58-64 of Kohler) is also sent over a network to a website since said identity is clearly needed to reproduce the color (column 5, lines 29-36 and column 13, lines 5-8 of Kohler). Kohler teaches sending the identity of the corresponding color to the website, and Knight is relied upon to teach that said website is specifically a *shopping* website for purchasing a product having the corresponding color. In other words, the only teaching for which Knight is relied upon is the teaching with respect to the particular *kind* of website to which the identity of the corresponding color is sent. Knight discloses sending the identity of the corresponding color to a shopping website for purchasing a product having a corresponding color (column 10, lines 13-20 of Knight).

So, the question then becomes, is sending the identity of the corresponding color to a particular kind of website for the purpose of commerce an obvious modification to make to Kohler? Since sending the identity of the corresponding color to a website has already been taught by Kohler, sending said identity to a particular website would be well within the ability of one of ordinary skill in the art at the time of the invention. Further, Knight has provided the motivation for combining the references. The motivation is specifically to aid the purchase of particular products by allowing a buyer to select and choose between various possible colors in a set of products (column 3, lines 7-12 of Knight). Since both Kohler and Knight teach sending the identity of a color to a website, and Knight simply provides additional teaching as to which kind of website one may wish to send color data, Kohler can be readily modified according to the teachings of Knight set forth in the prior art rejections.

Further, while Knight teaches that the identity of the colors to be sent to the website are selected manually, Knight has not at all been relied upon to teach any kind of automatic selection. Kohler teaches *inter alia* the determination of the identity of the corresponding color and sending the identity of the corresponding color over a network to a website. The determination and sending steps taught by Kohler are performed automatically. However, the language of claim 1 does not necessitate any automatic

processing. Manual processing by a user would read on the claim. But, since Kohler does teach that the steps are performed automatically, Appellant's arguments in this respect are moot.

Finally, it is *the* identity of the corresponding color that is sent to the website, and not merely *an* identity, since Kohler (and not Knight) is the primary teaching which teaches that the identity of the corresponding color is sent to the website. Kohler teaches both determining the identity of the corresponding color (figure 6(S603-S610); column 10, lines 1-7; and column 12, lines 58-64 of Kohler); and sending the identity of the corresponding color over a network to a website (column 4, lines 61-65 of Kohler). Thus, Appellant's arguments with respect to *the* identity versus *an* identity do not address the actual combination of Kohler and Knight that has been set forth by Examiner in the prior art rejections.

In brief, the only limitation for which Knight has been relied upon in rejecting claim 1 is the limitation regarding the specific *type* of website to which the identity of the corresponding color has been sent. Since setting up a particular type of website to send color identity data is well within the level of skill of one of ordinary skill in the art at the time of the invention, and adequate motivation has been found within Knight to modify Kohler accordingly, claim 1 is properly rejected under 35 USC § 103(a) over Kohler in view of Knight.

**Regarding Section C of Appellant's Arguments:**

Since claim 1 has been shown to be properly rejected under 35 USC § 103(a) over Kohler in view of Knight, claims 5-8 and 10 cannot therefore be considered allowable merely due to their respective dependencies from claim 1.

**Regarding Section D of Appellant's Arguments:**

Since claim 1 has been shown to be properly rejected under 35 USC § 103(a) over Kohler in view of Knight, claim 9 cannot therefore be considered allowable merely due to its dependency from claim 1.

Further, Appellant has merely alleged that there is no motivation to combine the teachings of Lee (USPN 5,528,703) with the teachings of Kohler, when such motivation has been clearly presented (see page 9, lines 16-18 of the final rejection of 02 February 2007). The motivation is specifically found within Lee.

**Regarding Section E of Appellant's Arguments:**

Since claim 1 has been shown to be properly rejected under 35 USC § 103(a) over Kohler in view of Knight, claims 12 and 13 cannot therefore be considered allowable merely due to their respective dependencies from claim 1.

**Regarding Section F of Appellant's Arguments:**

In Ringland (USPN 5,751,829), a plurality of colors are matched to a specifically marked color, and not to a plurality of colors. The color from the plurality of colors which matches the desired marked sample color is the dominant color, since said color is the one that is to be used based on the matching of said color with the marked sample color. In the final rejection (see page 4 of final rejection), when Examiner noted that the term "dominant color" is very broad terminology, Examiner was expressly noting that, while Examiner may have interpreted "dominant color" in a manner that is not precisely the same as that in the present specification, Examiner's interpretation is still a reasonable one. It is reasonable to consider the specifically marked color to be the "dominant color" since the specifically marked color is the color that is being matched, and upon which the operations depend.

Finally, the manner in which Kohler and Ringland are combined, along with a clear motivation to combine the references, was set forth in the final rejection (see last two lines of page 11 to page 12, line 6 of final rejection). Both Kohler and Ringland are concerned with image data processing and color matching. Thus, their respective disclosures are not unrelated, and they are within the same field of endeavor. One of ordinary skill in the art at the time of the invention, seeing Ringland, would be

motivated to modify the teachings of Kohler so as to allow a user to select a region from which a dominant color is determined and matched and then the identity of the corresponding matching color from the defined color space presented to the user, as taught by Ringland. While Ringland performs such an operation in terms of paint colors, the color matching is done *via* image data processing techniques. Thus, the color matching is as applicable to other types of colors as it is to paint colors. The motivation for modifying Kohler according to the teachings of Ringland was also clearly set forth in the final rejection. The motivation for combining the teachings of Ringland with the primary teachings of Kohler would have been to allow the user to properly match a desired color with an available color palette (column 17, lines 18-23 of Ringland). Thus, a *prima facie* case of obviousness under 35 USC § 103(a) was properly set forth in the final rejection.

**Regarding Section G of Appellant's Arguments:**

Since claim 14 has been shown to be properly rejected under 35 USC § 103(a) over Kohler in view of Ringland, claim 18 cannot therefore be considered allowable merely due to its dependency from claim 14. Further, Appellant has merely alleged that there is no motivation to combine the teachings of Lee (USPN 5,528,703) with the teachings of Kohler, when such motivation has been clearly presented (see page 14, lines 3-4 of the final rejection). The motivation is specifically found within Lee.

**Regarding Section H of Appellant's Arguments:**

Since claim 14 has been shown to be properly rejected under 35 USC § 103(a) over Kohler in view of Ringland, claims 22 and 23 cannot therefore be considered allowable merely due to their respective dependencies from claim 14. Further, Appellant's arguments with respect to the alleged lack of teaching of determining a dominant color have already been addressed above. In Section H of the Appeal Brief, Appellant merely alleges that the reference is lacking.

**Regarding Section I of Appellant's Arguments:**

Since claim 14 has been shown to be properly rejected under 35 USC § 103(a) over Kohler in view of Ringland, claim 24 cannot therefore be considered allowable merely due to its dependency from claim 14. Further, the portion of Liu (USPN 5,594,807) cited in the final rejection (figure 4; figure 5; and column 9, lines 56-67 of Liu) show that the peak brightness value is determined and then used in the underlying computations. The determination of the peak brightness value for the histogram is a determination of a dominant color since the peak brightness value determines the furthest range of color values by which the remaining values are normalized.

**Regarding Section J of Appellant's Arguments:**

Appellant's arguments appear to be predicated on the idea that Lee does not mention "color". However, this ignores the combination set forth in the final rejection (see page 16, line 9 to page 17, line 2 of the final rejection). However, Lee operates on image data based on aspects such as brightness levels, detected edges, and detected textures. Thus, Lee operates on at least one color, and is applicable to multiple colors since the multiple colors taught by Kohler are primary colors, and thus separable from each other. The teachings of Lee can be applied to the colors individually, or together by taking into account the brightness level of the image data. Further, while Lee may have a different intended purpose for detexturizing the image data, the fact remains that Lee does teach detexturizing the image data.

The motivation to combine Lee with Kohler was expressly set forth in the final rejection (see last line of page 16 to page 17, line 1 of final rejection). While texturing may not be a central issue in Kohler, Lee does provide both the teaching with respect to detexturizing and the motivation one of ordinary skill in the art at the time of the invention would have had to combine the teachings of Lee with Kohler. Kohler and Lee are analogous art since they are both concerned with digital image data processing for different types of objects. All of the limitations of claim 26 are taught by the combination of Kohler and

Lee. The manner in which Kohler and Lee are combined, along with the motivation one of ordinary skill in the art at the time of the invention would have had to combine the references (as expressly set forth in Lee), is also articulated in the final rejection. Thus, the combination of references is proper and a *prima facie* case of obviousness has been made in the final rejection for claim 26.

**Regarding Section K of Appellant's Arguments:**

Since claim 26 has been shown to be properly rejected under 35 USC § 103(a) over Kohler in view of Lee, claim 27 cannot therefore be considered allowable merely due to its dependency from claim 26. Further, Appellant's arguments with respect to the combination with respect to Knight has already been addressed above in the arguments regarding section B of Appellant's arguments.

**Regarding Section L of Appellant's Arguments:**

Since claim 28 has been shown to be properly rejected under 35 USC § 103(a) over Kohler in view of Ringland, claim 29 cannot therefore be considered allowable merely due to its dependency from claim 28. Further, Appellant's arguments with respect to the combination with respect to Knight has already been addressed above in the arguments regarding section B of Appellant's arguments.

**Regarding Section M of Appellant's Arguments:**

Since claim 28 has been shown to be properly rejected under 35 USC § 103(a) over Kohler in view of Ringland, claim 32 cannot therefore be considered allowable merely due to its dependency from claim 28. Further, Appellant's arguments with respect to Liu have already been addressed above in the arguments regarding section I of Appellant's arguments.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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Conferees:

David K. Moore

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KING Y. POON
SUPERVISORY PATENT EXAMINER